

**REMARKS**

**Foreign Priority:**

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority under 35 U.S.C. § 119(a)-(d), and for confirming that the certified copy of the priority document has been received at the Patent Office.

**Drawings:**

Applicant thanks the Examiner for indicating that the drawings filed with the present application have been approved.

**Information Disclosure Statement:**

Applicant thanks the Examiner for initialing and returning Form PTO/SB/08 A & B filed on January 4, 2002, thus indicating that all of the references listed thereon have been considered.

**Specification:**

The Examiner has objected to the Specification because the specification does not have section headings, or a "Brief Description of the Drawings."

As shown in the previous section, Applicant has amended the specification to add section headings and a brief description of the Drawings. Applicant hereby requests the Examiner reconsider and withdraw the above rejection.

**New Claims:**

Applicant has added new claims 7-12 to further claim the present invention. Applicant submits that these claims are allowable over the cited art for reasons similar to those set forth below, regarding claims 1-6.

**Claim Objections:**

The Examiner has also objected to claims 1 and 3-6 for a number of reasons. First, the Examiner has requested the item numbers be removed from the claims. Additionally, the Examiner has pointed out a minor typographical error in claim 3.

Applicant has amended these claims as shown in the previous section and submits that these amendments sufficiently address the Examiner's concerns regarding these claims.

Further, Applicant notes that the above referenced claim amendments have been made to merely clarify the claimed invention and are not intended to narrow the original scope or spirit of the claims in any way.

**Claim Rejections:**

Claims 1-6 are all of the claims pending in the present application, and currently all of these claims stand rejected.

***35 U.S.C. § 103(a) Rejection - Claims 1-3:***

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,614,567 to Al-Salameh et al. in view of U.S. Patent No. 5,737,460 to Damen et al. On view of the following discussion, Applicant respectfully traverses the above rejection.

In using Al-Salameh, the Examiner is primarily relying on Figure 2, to reject the claims. Specifically, the Examiner alleges that Al-Salameh discloses a terminal 220 (which the Examiner is equating to the transmitter) having a multiplexer 205 which transmits a signal through a amplifier 215 to a combiner 281. The terminal 220 receives signals in a wavelength band of 1 to M, multiplexes them, and then sends the signals to the combiner 281 where the signals are

combined with signals (K to N) from a second multiplexer 255. According to Al-Salameh, the wavelength bands of the two terminals “may or may not” overlap. *See* Al-Salameh, col. 4, lines 24-30 and 49-61.

Following the combination of the signals (in the combiner 281), the signal is then transmitted to a repeater sight 235, where the wavelength bands are separated, amplified and then re-combined for transmission through a fiber 275.

In using the above disclosure, the Examiner is alleging that Al-Salameh discloses every feature of the claimed invention, except having the multiplexer station not closer to the transmitter terminal, than the sum of the total optical powers guided by each of the branches plus the losses due to the multiplexing that has decreased below the total optical power. For this aspect of the claimed invention, the Examiner is relying on the teachings of Damen.

Specifically, the Examiner alleges that using the teachings of Damen, it would have been obvious to ensure that the multiplexer station of Al-Salameh is located in such a way as to ensure that the power output of the station does not exceed the maximum optical power output budget in the fiber guiding the full bandwidths of wavelengths, in order to prevent the occurrence of nonlinear optical effects and distortion in the fiber.

However, Al-Salameh proposes to multiplex the signals from systems 200 and 250 through multiplexers 281. Thus, using the teaching of Damen, a skilled artisan would have ensure that the total power of the combined signals output by multiplexer 281 of transmitter 220 would not exceed the maximum optical power output budget for fiber line 275.

Therefore, in view of the foregoing, Applicant submits that above combination of references fails to teach or suggest each and every feature of claimed invention, for at least two reasons.

First, because the Examiner is reading the terminal 220 as the “transmitter” of the present invention, there is no disclosure of the terminal 220 sending signals in at least two separate branches. As shown in Figure 2 of Al-Salameh, the signals are combined within the terminal 220 and there is only one signal line coming out of the terminal 220. This is different than the present invention. Namely, in the present invention, the multiplexer is located “outside” of the transmitter (terminal 220). Thus, even if the references were combined, the resultant combination fails to teach or suggest each and every feature of the claimed invention.

Applicant submits that this distinction, alone, evidences the inappropriateness of the above rejection. Namely, in the present invention, the inventors have proposed to use, in a first section of a fiber line, two optical fiber paths in parallel. This allows one to double the maximum optical power launchable in the fiber line, as compared to the conventional situation, as shown in Figure 2 of Al-Salameh. Thus, the idea to then multiplex the signals propagating in these two optical paths at a position remote from the transmitter, and chosen so that the combined signals don’t exceed the maximum power for the fiber line, is not at all derivable from the cited documents. For example, a fiber line as shown in the non-limiting exemplary embodiment depicted in Figure 5, of the present application, and comprised of sections 12a, 12b, 14 and multiplexer 13 is different from line fiber 275 shown on Figure 2 of Al-Salameh.

Secondly, Applicant submits that the Examiner's comments regarding the Damen reference are insufficient to establish a *prima facie* case of obviousness. Namely, the Examiner alleges that because of the teachings of Damen, it would have been obvious to ensure that the multiplexer station of Al-Salameh is located in such a way as to ensure that the power output of the station does not exceed the maximum optical power output budget in the fiber guiding the full bandwidths of wavelengths, in order to prevent the occurrence of nonlinear optical effects and distortion in the fiber. Although Applicant disagrees with the Examiner's statement, even if this statement were true, it is sufficient to render claim 1 obvious.

Specifically, even if it were obvious to make the maximum optical power budget below a certain threshold, there is no teaching or suggestion of the relationship set forth in the claimed invention. Stated differently, just because it is obvious to keep the power below a threshold, it is not obvious to position the multiplexer at a position (with respect to the transmitter) as claimed. One simply does not logically follow from the other.

In view of the foregoing, Applicant submits that (1) it would not have been obvious to combine the references as suggested by the Examiner, and (2) even if the references were combined, the resultant combination would fail to teach or suggest each and every feature of the claimed invention. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness, as required under the provisions of 35 U.S.C. § 103(a). Accordingly, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of the above claims.

AMENDMENT UNDER 37 C.F.R. §1.111  
Application Number 10/035,303

Our Ref: Q67909  
Art Unit: 2633

***35 U.S.C. § 103(a) Rejections of Claims 4-6:***

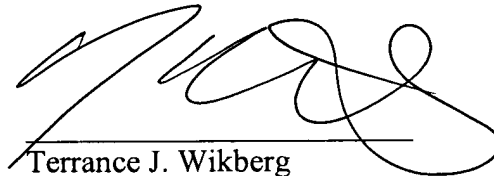
Because claims 4-6 depend on claim 1, and because neither of the Ruffin nor Kerfoot references, cited by the Examiner, cure the deficient teachings of the above discussed references, Applicant submits that these claims are also allowable, at least by reason of their dependence.

**Conclusion:**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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